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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/819,922	03/28/2001	Roger W. Engelbart	38190/196421	4358

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EXAMINER

BALI, VIKKRAM

ART UNIT	PAPER NUMBER
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2623

DATE MAILED: 07/01/2004

3

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/819,922

Applicant(s)

ENGELBART ET AL.

Examiner

Vikkram Bali

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-41 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-8, 10-11, and 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brooks et al (US 5513537) in view of Beck et al (US 4415811).

With respect to claim 1, Brooks discloses defect detection in composite structure (see col. 1, lines 21-27), a camera for receiving images, (see figure 8, 226, col. 12, lines

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7-9); a processor for processing the images and outputting response, (see figure 8, numerical 230, the computer does includes a processor to process the data and memory as there is always a memory in the processor to store the data that can be use in later time, as claimed in claim 19); a light source positioned oblique angle, the light reflected by defects different from the light reflected from the other portions, (see figure 8, numerical 224, col. 11, line 64 through col. 12 line 7) as claimed. However, he fails to disclose he light source having an infrared component, as claimed. Beck in optical scanning apparatus teaches a light source can be of different kinds one of that [light source] can be of infrared (see col. 3, lines 60-63) as claimed. Therefore, one ordinary skilled in the art at the time of can obviously combine the teaching of Beck i.e. use of infrared light source in an optical scanning apparatus, to the inspection method of Brooks because it is conventionally done.

With respect to claim 2, Beck further teaches, light source being incandescent light with an infrared component, (see col. 3, lines 60-63) as claimed.

With respect to claim 3, Brooks further discloses, camera being video camera, (see col. 12, lines 7-9) as claimed.

With respect to claim 4, it is well known in the art to use a filter in the camera, in order to block the noises or the un wanted light. Therefore, it would have been obvious to one ordinary skilled in the art at the time of invention to simply use the filter in the camera as it is well known and furthermore, to block the unwanted light.

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With respect to claim 5, 6 and 8, Beck further teaches, the light source being LED's arranged in cluster and incandescent light fiber, (see col. 3, lines 61-68) as claimed.

With respect to claim 7, it would be a design choice to use any power of light source, this will depends upon the nature of the inspection required or the light required to image the test sample by the camera. Therefore, it would have been obvious to one ordinary skilled in the art at the time of invention to use simply use any power of light source, as that [light source] depends upon the nature of the inspection required or the light required to image the test sample by the camera.

With respect to claim 10, Brooks further discloses, angle is about 45 degrees, (see col. 11, last two lines one can use any angle as best suited for the inspection) as claimed.

With respect to claim 11, Brooks further discloses, plurality of adjacent composite strip are positioned in a common direction and the light source is positioned substantially perpendicular to the common direction, (see col. 7, liens 51-56, for the composite strips being the common direction and the figure 8 for the light source as located substantially perpendicular o the common direction) as claimed.

With respect to claims 14-16, Brooks further discloses, camera taking the images with pixels in the gray levels, binarizing images, by making the black and white and operator to set threshold, (see col. 12, lines 32-49) as claimed.

With respect to claim 17, Brooks further discloses, composite structure is a plurality of composite strips and being laid down by a head unit by a roller, (see figure 2,

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the roller 54 is use to put down the strips in order to make the composite structure, col. 6, lines 44-50). However, Brooks and Beck fail to discloses the camera and the light source are proximate the roller, as claimed in claim 17; and the camera and light source are mounted on head unit, as claimed in claim 18. But, as there is an inspection system details in the disclosure of Brooks the camera and the light source, together [camera and the light source] can very well be located close to the roller as the inspection is perform to detect if there is any defect present or not, and one obviously can see that the camera and the light unit should be place right on a unit that is the closest to the composite structure in order to do the inspection. Therefore, one ordinary skilled in the art at the time of invention can have the camera and the light source mounted close to the roller as the inspection is done for the placing of strips to make a composite structure by the use of roller, and the camera and light source should be located closest to the composite structure this will provide an apparatus that [apparatus] will use less room and make the apparatus more compact.

4. Claims 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brooks et al (US 5513537) in view of Beck et al (US 4415811) as applied to claim 1 above, and further in view of Weyenberg (US 5359525).

With respect to claim 9, Brooks and Beck discloses the invention substantially as disclose and as described above for claim 1. However, they fail to disclose, light source comprises two arrays positioned such that an acute angle is defined, as claimed.

Weyenberg teaches composite body inspection that includes light source comprises two

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arrays positioned such that an acute angle is defined, (see figure 1, numerical 44 and 45, the two light sources are located above the inspection sample) as claimed.

The references are combinable as they are analogous because they are solving similar problem of inspection using optical inspection.

The position of light sources as taught by Weyenberg can be incorporated in to the system of Brooks and Beck as there is a light source and adding another light source is easy, and doing that will provide an apparatus that does a complete inspection of the composite body in the positional relationships of the components in the composite article, (see col. 3, lines 2-8 of Weyenberg).

5. Claims 12-13 rejected under 35 U.S.C. 103(a) as being unpatentable over Brooks et al (US 5513537) in view of Beck et al (US 4415811) as applied to claim 1 above, and further in view of Bjork (US 6295129).

With respect to claims 12 and 13, Brooks and Beck discloses the invention substantially as disclosed and as described above for claim 1. However, they fail to disclose, marking device as inkjet sprayer to indicate the defects, as claimed in claims 12 and 13. Bjork teaches an arrangement for marking defects using a marking device as an inkjet sprayer to indicate the defects, (see col. 1, lines 33-36) as claimed. It would have been obvious to one ordinary skilled in the art at the time of invention to combine the references, because they are analogous as the references are detecting defects. One ordinary skilled in the art will be motivated in doing this, to be able to analyze the defects later in the time. Furthermore, it is conventional to mark the defects.

Claims 19-34 are rejected as the reasons set forth in the rejections for claims 1-18, because claims 19-34 are claiming subject matter as claimed in claims 1-18.

Claim 35 is rejected for the reasons as set forth in the rejection of claim 1+10+17+19, because claim 34 is claiming limitations as set forth and rejected in the claim 1+10+17+19. Furthermore, having a moving camera and the light source is a design choice, because one ordinary skilled in the art at the time of invention can simply consider either moving the camera and light source or the strip in order to inspect the entire strip of the sample. Therefore, it would have been obvious to one ordinary skilled in the art at the time of invention to have moving camera and the light source to inspect the entire strip of composite structure, as it depends on the field view of the camera.

Claims 36-41 are rejected as the reasons set forth in the rejections for claims 2-15, because claims 34-41 are claiming subject matter as claimed in claims 2-15.

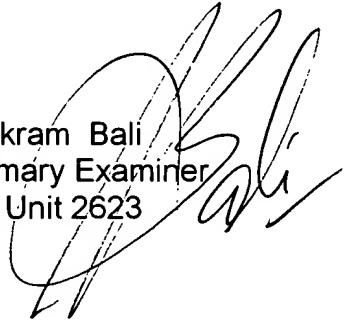
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vikkram Bali whose telephone number is 703.305.4510. The examiner can normally be reached on 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on 703.308.6604. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Vikkram Bali
Primary Examiner
Art Unit 2623



vb
June 17, 2004